REMARKS

It is noted that the claim amendments herein are intended solely to more particularly point out the present invention for the Examiner, and not for distinguishing over the prior art or the statutory requirements directed to patent ability.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1-15 are all of the claims pending in the present Application. New claims 13 - 15 have been added. Claims 1-7, 9, and 10 stand rejected under 35 US §102(b) as anticipated by US Patent 4,947,322 to Tenma et al. Claim 8 stands rejected under 35 US §103(a) as unpatentable over Tenma, further in view of the extract from Elmasri et al., "Fundamentals of Database Systems". Claims 11 and 12 stand rejected under 35 US §103(a) as unpatentable over Tenma/Elmasri, further in view of US Patent 5,774,868 to Cragun et al.

These rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

As described and claimed, for example by claim 1, the present invention addresses a computer method that provides a department store space-requirements database comprising a compendium of individual department store space-requirements history. A department store space-availability database is also provided, comprising a compendium of at least one of department store space management solutions, department store space information, and department store space diagnostics. A data mining technique interrogates the department store space-requirements and department store space-availability databases and generates an output data stream that correlates the department store space-requirements problem with department store space-availability solution.

II. THE PRIOR ART REJECTION

The Examiner alleges that Tenma anticipates claims 1-7, 9, and 10, and, when combined with Elmasri, renders obvious claim 8, and when combined with Elmasri and Cragun, renders obvious claims 11 and 12.

Applicants disagree.

First, it is pointed out that, although the store gondolas of Tenma are arguably reasonably related in a generalized manner to the "department store" problem addressed by the present invention, the method used in Tenma is clearly not a "data mining technique", as one of ordinary skill in the art would understand that terminology.

The computer in Tenma is clearly used to perform an automatic calculation function, as the user provides inputs to select/deselect items from the layout. The goal of Tenma is to allow the user to arrive at an optimum layout by a process involving user manual inputs for making adjustments of the items included in the layout.

Applicants submit that, to one of ordinary skill in the art, this user-interactive optimization technique is entirely different from "data mining", which is understood by one of ordinary skill in the art as meaning that the computerized tool evaluates data in one or more data groups to isolate relationships or patterns that are considered hidden in the data.

That is, in the 3rd Edition of Webster's Computer & Internet Dictionary (Random House) the term "data mining" is defined: " *A hot buzzword for a class of database applications that look for hidden patterns in a group of data. For example, data mining software can help retail companies find customers with common interests. The term is commonly misused to describe software that present data in new ways. True data mining software doesn't just change the presentation but actually discovers previously unknown relationships among the data.*"

In the 4th Edition of Microsoft Computer Dictionary (a copy of page 125 thereof is attached for the Examiner's convenience), the term "data mining" is defined: "*The process of identifying commercially useful patterns or relationships in databases or other computer repositories through the use of advanced statistical tools.*"

Even the reference by Elmasri et al., cited by the Examiner, defines "data mining" as: "*... [T]he mining or discovery of new information in terms of patterns or rules from vast amounts of data.... We will briefly review the state of the art of this rather extensive field of data mining, which uses techniques from such areas as machine learning, statistics, neural networks, and genetic algorithms.... The knowledge discovery process comprises six phases: data selection, data cleansing, enrichment, data transformation or encoding, data mining, and the reporting and display of the discovered information.*"

Applicants submit that the technique described in Tenma is not data mining, since this description would be inconsistent with the above-recited definitions. Using the expanded definition as seemingly applied in the rejection currently of record, "data mining" would be used to describe any process of optimization in which a calculator is used to automatically calculate an algorithm providing the end result.

That is, according to this expanded definition, one using a computer tool having the algorithm to automatically compute Federal income tax would be using "data mining" in the process of determining the desired "optimum" tax liability.

It is noted that MPEP §2111 requires that: "*The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach*". (Emphasis by Applicants)

Therefore, Applicants submit that Tenma would not reasonably be described by one of ordinary skill in the art as "data mining" unless this reference had, for example, described a data mining technique to discover the "rules" in the knowledge base 14 (e.g., lines 11-13 of column 5).

Moreover, Applicants submit that one of ordinary skill in the art would agree that there are "department store space-requirements database" and "department store space-availability database" that are being interrogated in Tenma, or that there is an output stream that correlates a "space-requirements problem" with a "space-availability solution".

Hence, turning to the clear language of the claims, there is no teaching or suggestion of " ... employing a data mining technique for interrogating said department store space-requirements and department store space-availability databases for generating an output data stream, said output data stream correlating department store space-requirements

problem with department store space-availability solution", as required by the independent claims.

Therefore, Tenma clearly does not anticipate claims 1-7 and 9-10.

Moreover, relative to the rejection for claim 8 and the urged modification in the rejection to employ "... neural networks for the rules in the knowledge base 14 in order to have a more user-friendly system", Applicants submit that, to one of ordinary skill in the art, this statement indicates considerable confusion on the part of its author.

First, Applicants submit that such modification, understood as meaning that a neural network replaces the rules in the knowledge base 14, would drastically change the principle used in the technique in Tenma. Therefore, such modification would be improper under MPEP §2143.01: "*The proposed modification cannot change the principle of operation of a reference.*"

That is, as best understood, by using a neural network in place of the precise rules contained in knowledge base 14, the user would have to provide a training data base to set up the neural network. This is an entirely different problem and technique from that discussed in Tenma, in which the "rules" of the computerized algorithm calculation are already provided to the computer.

Second, Applicants submit that, to one of ordinary skill in the art, substitution of a neural network for the rules in the knowledge base 14 would not provide the benefit of somehow making Tenma more "user-friendly".

That is, the requirement that the user would have to deal with a training data set and develop the neural network would not at all be considered by one of ordinary skill in the art as more "user-friendly" than the simple interactions required in the current version of Tenma.

Finally, it is pointed out that the results of using a neural network in place of the precise rules of knowledge base 14 would inherently introduce an uncertainty that is not currently present in Tenma. That is, the neural network will always calculate a new set of rules based on the specific training data set that is used. The rules present in knowledge base 14 are understood as being precise rules that provide a precise algorithm that will always provide the same answer for a layout modification.

Relative to the rejection for claims 11 and 12, Applicants submit that this urged combination is also improper because, contrary to the Examiner's assertion, to one of ordinary skill in the art, using a neural network would not somehow mysteriously "... speed up the process of arranging the goods in a store." As explained above, incorporation of a neural network would slow down the process described in Tenma, a process in which a predetermined set of rules has already been developed and stored in knowledge base 14.

Therefore, Applicants submit that the urged modification of Tenma to somehow incorporate neural networks would not be considered by one of ordinary skill in the art to be either reasonable or desirable, and that claims 8, 11, and 12 are clearly patentable over Tenma.

For the reasons stated above, the claimed invention is fully patentable over the cited references.

Further, the other prior art of record has been reviewed, but it too, even in combination with Tenma, Elmasri, and Cragun, fails to teach or suggest the claimed invention.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-15, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

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